

3.7 RF Exposure Compliance

The maximum measured power, P is -6.0dBm

The antenna gain, G is 0.5dBi

The maximum EIRP power = P + G

EIRP = -6.0 + 0.5 = -5.5dBm, or 0.00028W

The limits for Maximum Permissible Exposure (MPE) for transmitter operating at 2.4Hz, MPE is 1mW/cm², or 10W/m²

$S = 10\text{W/m}^2$

The Power Density is related to EIRP with the equation:

$S = \text{EIRP} / 4\pi D^2$, or $10 = 0.00028 / 4\pi D^2$,

The minimum safe separation distance, D = 0.15cm, which is below 20cm